

## Relationship between Sports Motivation and Mindfulness among College Sports Players in Pakistan

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### Abstract

The present study aims to determine the association between motivation and mindfulness among college sports players by examining types of motivation from most self-determined (intrinsic motivation) to lowest self-determined (amotivated) and its relation to dispositional mindfulness. A total of 120 college sports players served as participants (90 boys & 30 girls). They filled Sports Motivation Scale and Mindfulness Attention Awareness Scale with some demographic information. The demographic characteristics revealed that most of the participants were in team sports (80%) and played for last 1-5 years (86%). A significant relationship was found between Intrinsic motivation with mindfulness ( $r = .70^{**}$ ). Regression analysis showed that intrinsic motivation and integrated regulations were significantly predicting mindfulness (63% variance). It is interesting to know that in Pakistani colleges, there are more boys participate in sports even in the absence of facilities (coach is available to 35% of participants only). Self-regulation and intrinsic motivation can be utilized to promote the well-being of youth with limited resources available.

**Keywords:** Sports motivation, mindfulness, and Pakistan college sports players

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### Introduction

Individual participation in sports is connected with physical and mental health benefits. Regular participation in sports is marked by a healthy lifestyle which not only serves as protective factors for psychological and physical illnesses but also strengthens support network (Durlak&Wells,1997). People of all ages arebenefit from participation in sports. However, it

becomes more significant for young adults and adolescents to be involved in healthy activities so that these benefits can be expanded for adjustment in social life and their future career (Institute of Medicine, 2013).

According to World Health Organization (WHO, 2008) participation in regular physical activity and sports enrich people of both sexes, all ages and those who are facing different conditions such as disable persons with a range of physical, social and mental health benefits not only its benefits stops here, but sports help in reducing violence, enhance functional capacity and inculcate social interaction and integration. Furthermore, the best way to maximize health benefits is through direct participation rather than playing virtually (Thompson et al., 2011).

Regular sports participation not only positively influence physical health but it had a tremendous psychological impact by increasing self-esteem, social connectedness and lowering depression, suicidal ideation and attempts, aggression, and delinquency (Asztalos et al., 2009; Department of Sports and Recreation Government of Western Australia, 2002; Szabo, 2003). This relationship between psychological variables and sports participation is reciprocal. One of the critical variables that have been extensively studied is “motivation” (Brustad, 1993; Roberts, 1992; Roberts, 2001). One of the most cited theory in this regard is self-determination theory by Ryan and Deci(2000) which identifies three types of regulation with various levels of self-determination from non–self-determined forms of regulation (i.e., amotivation, external and introjected) to self-determined types of regulation (i.e., identified, integrated and intrinsic). Amotivation can be described as lack of intention to act. People who are amotivated are the one who do not possess the sense of purpose and hope for future. They also lack in the expectation of reward. In terms of Self-determination theory components they may lack in autonomy and competence.

The next four forms of regulation i.e. external regulation, introjected, identified and integrated represent extrinsic motivation. External regulation is controlled by the external factors like rewards and punishment. Introjected regulation is internally driven with external perceived locus of causality. In this form external source of regulation is taken by the person and later

reinforced through internal pressures such as negative self-esteem, guilt, ego enhancement or anxiety. This means that in this form of motivation the locus of control shifts from external towards internal sources although the internalization is fractional because the outward regulatory process is taken in but not acknowledged as one's own (Ryan & Connell, 1989). Identified regulation is more autonomous than introjected in which a person involves in an activity because of the importance of behavior and add its value to life goals. An action is performed to gain pleasure or personal achievement or its beneficial value (Koestner, Losier, Vallerand, & Carducci, 1996). The Integrated Regulation is the most autonomous form of extrinsic motivation. An action is performed because one's attributes. This occurs when individual connects one's behavior with other principles and needs of oneself (Deci & Ryan, 2000), for example participating in sports because it reflects the essence of oneself.

Intrinsically motivated behaviors have a high degree of self-determination whereas amotivating behaviors are the least self-determined. This theory focuses on individual's inherent growth tendencies including competence, relatedness, and autonomy. To accomplish individual's innate potential s/he needs encouragement from social environment resulting in fulfillment of psychological needs thus bring positive consequences otherwise if not fulfilled negative results would be experienced (Deci & Ryan, 1991). So the theory interconnects the psychological components with socialization, therefore presenting a complex model of interplay between psychological and social variables that needs to be explored more.

One significant variable that has extensively been studied in this regard is mindfulness, defined as a quality of consciousness including both awareness and attention. Awareness acts as constant supervisor of the inner and outer environment whereas attention is a process of focusing conscious awareness (Westen, 1999). Exploring mindfulness in sports psychology is persuasive and makes sense for some theoretical reasons such as Csikszentmihalyi, (1990) 'Flow Theory' theoretically shows that the experience of peak performance and mindfulness are positively related means that individual having a high level of performance would experience non-judgmental and present-moment awareness. Thus mindfulness is linked to the essence of the psychology of high sports performance (Ravizza, 2002). Two studies based on surveys using

samples of students demonstrate that higher levels of usual physical activity were moderately related with increased levels of dispositional mindfulness (Gilbert & Waltz, 2010; Roberts & Danoff-Burg, 2010). However research on exploring the relationship between mindfulness and motivation among sports players is rare and it is important to be carried out, especially in the Asian country with having different culture and situation.

In a study by Wilson, Rodgers, Fraser, and Murray (2004) intrinsic motivation and identified regulation significantly predicted positive outcomes for sportspersons regarding excitement, happiness, satisfaction, and persistence. Studies have suggested that self-determined form of motivation leads to greater effort, better performance, higher self-esteem, and better adjustment, whereas amotivation is linked to burnout, and fatigue (Kasser & Ryan, 1996; Pelletier et al., 1995; Vallerand et al., 1992). So when it comes to regular sports participation intention plays an essential role in determining the outcome.

In Pakistan, the sports structure is not well-established. In the school and colleges, there has been a scarcity of infrastructure and human resources which result in a decline of sports performance not only at a small scale but also at national level. Hockey is the national game of Pakistan; however, for Rio Olympics 2016 Pakistani hockey team did not qualify for the first time in the history of Olympics (Zuberi, 2015). Even with these limitations and resource constraints, there are some success stories. For example, Pakistani soccer team of street children won a bronze medal in 2014 in the international event (Dawn News, 2014); a Pakistani boxer secured World Boxing Council Silver Flyweight Title in 2016 (Dawn News), Samina Baig is the first Pakistani as well as the first Muslim woman to climb Mount Everest in 2013. While analyzing such success stories, it is important to investigate the role of internal motivation, and cognitive appraisal to a better understanding of the interplay of these dynamics in sports performance in particular and mindfulness wellbeing overall.

### **Rationale**

In daily life individuals especially youngsters are confronted with challenges of self-regulation. Want to pay considerable attention to everyday tasks so they can manage the time effectively to

accomplish life goals especially in academics (Teixeira, 2012). Sports provide an excellent platform in this regard. In one research by Daniyal, Nawaz, Hassan, and Mubeen (2012) it was found that co-curricular activities improve academic performance regarding GPA of the university students.

Every individual who participates in sports come with different motivation which affects their performance and experience. Therefore it is important to explore which type is more important, so by increasing different forms of motivation, mindfulness and psychological well-being can be increased. In developing countries like Pakistan, the pivotal importance of sports in individual's life is not even acknowledged, as the status of sports is at emerging stage with limited research studies in sports. This study will provide not only an understanding of sports importance but also its role in strengthening individuals' capabilities thus encouraging researchers to explore vital aspects of sports.

The main purpose of this research is to study the association of motivation and mindfulness with a focus on intrinsic and extrinsic motivation comparison. Following hypotheses were formulated in this research.

1. There is a positive relationship between motivation and mindfulness among college sports players.
2. Intrinsic motivation would significantly contribute to dispositional mindfulness among college sports players.

## **Method**

The study was carried out by using cross-sectional research design. College sports players were assessed one time with the help of standardized instruments.

### *Participants*

A total of 120 college sports players (aged 16-20, Mean Age =18(S.D.=1.37) 90 Boys & 30 Girls) served as participants who filled the English version of Sports Motivation Scale and

Mindfulness Attention Awareness Scale along with the demographic sheet asking questions related to their experience in sports, types of games being played.

#### *Inclusion Criteria*

For the recruitment of the participant, the inclusion criterion was set by individual participation in college sports at the official level. All the players who have been participating in sports for at least one year either representing their school or college at some domestic, national or international level were selected as participants.

#### *Instruments*

The protocol consists of Demographic Sheet, Sports Motivation Scale, and Mindfulness Attention Awareness Scale. The details of these instruments are as follows.

#### *Demographic data sheet*

The demographic data sheet consisted of the participant's name which was optional, age, gender, college, marital status, class/grade, presence of any mental or physical illness, and hobbies. The sports-related questions include the name of the game, reasons for participation, average daily time spent in sports, expertise in particular sport, satisfaction level with sports experience, motivational factors for practicing in the particular sport, facility of coach/supervisor, success records and hobbies other than sports.

#### *Sports Motivation Scale (SMSII) (Pelletier, Rocchi, Vallerand, Deci, & Ryan, 2012)*

The revised version of sports motivation scale by Pelletier, Rocchi, Vallerand, Deci, and Ryan (2012) has been used in the present research to assess the motivation of sports players. The scale consisted of 18 items (e.g., item 5 "because practicing sports reflects the essence of whom I am") with a 7-point Likert scale ranging from 1 (Does not correspond at all) to 7 (Corresponds completely). The scoring of the subscale includes computing mean of each subscale separately. The high score on any subscale identify the individual type of motivation also the scores of the overall scale is computed by combining the means of the subscales into a composite index of self-determined motivation where each motivation is weighted according to

its positioning on the self-determination continuum. The subscales include intrinsic, integrated, identified, introjected, external and amotivation. For the present study, this scale showed satisfactory reliability values. The coefficient alpha reliability values for the were 0.88 of intrinsic motivation, 0.80 of Integrated, 0.82 of identified, 0.70 of Introjected, 0.74 of External regulation and 0.81 of amotivation which makes it a suitable instrument to be used.

#### *Mindfulness Attention Awareness Scale (Brown, & Ryan, 2003)*

The Mindfulness Attention Awareness Scale is one of the extensively used valid and reliable instruments for assessing mindfulness as innate individual characteristic and quality of consciousness comprising of awareness and attention. In the present study, the *Cronbach's Alpha Reliability* was reported to be 0.82. The authors of the scale consider mindfulness as the process we learn through experience. The scale has 6 point Likert scale ranges from (almost always) to (almost never); to score the scale the mean is computed of the 15 items (e.g., item 9 I get so focused on the goal I want to achieve that I lose touch with what I'm doing right now to get there) where a higher score reflects a higher level of dispositional mindfulness.

#### *Procedure*

A total of 120 college sports players (90 boys and 30 girls) served as participants for this research. They were approached in their academic institutes of Rawalpindi City, Pakistan during college hours and scales were administered in the group setting. These groups consisted of 5-10 participants depending upon the number of sports players in each class. Consent was obtained both from college administration and individual participants. Respondents were briefed about the purpose and researcher was present for any query during the data collection process. On average each respondent took 10-15 minutes to complete the questionnaires. Results were analyzed using SPSS (Statistical Package for Social Sciences) version 20.0. Pearson correlation and Backward Regression analysis were applied to find out the influence of forms of motivation on mindfulness among college sports players.

## Result

### *Demographic Characteristics of Respondents*

The sample comprises of 120 college sports players including 90 boys and 30 girls. This gender ratio difference indicates the cultural norms variation for men and women. The age range of participants was 16–20 years. The mean age of respondents was 17.75. Majority of the participant was in college first years (53(44.2)). All participants were unmarried (100%).

Regarding sports-related variables, most of the participants were in team sports (84, 70%). Majority of the participants (85.8%) were playing sports for upto 1-5 years and 1-2 hour was daily participating in their relevant sports. 93.3 % participants believe that sports are beneficial for health both psychological and physical and that is the reason for their participation in sports. 80% considered their sports experience to be good and very good. When asked about their motivational factor for sports participation, 66% stated that self-motivation is the main reason for their participation. This statement is consistent with the literature cited above concerning Pakistani context; furthermore, this statement is supported by table I where intrinsic motivation is found to be more prevalent among participants. It is interesting to note that 74 of the participants do not have any significant achievement; however, they still participate in sports by considering the benefits.

Table I

*Mean and Standard deviation values of the forms of motivation based on Sports Motivation Scale (N= 120).*

Forms of Motivation	M(SD)
Intrinsic regulation	14.32(4.21)
Integrated regulation	13.62(4.34)
Identified regulation	14.1(4.32)
Introjected regulation	12.80(3.52)
External regulation	10.14(4.46)
Nonregulation	8.41(4.22)



The mean scores are presented in the table above show that intrinsic motivation has higher mean value as compared to other forms of motivation which have been supported by the demographic table.

Table 2

*Summary of Pearson Correlations values for Motivation and Mindfulness among College Sports Players (N= 120).*

Variables	1	2	3	4	5	6	7
1. Mindfulness	-	.68**	.62**	.53**	.21*	-.36**	-.51**
2. Intrinsic Regulation	-	-	.70**	.65**	.49**	-.22**	-.25**
3. Integrated Regulation	-	-	-	.66**	.41**	-.21**	-.29**
4. Identified Regulation	-	-	-	-	.45**	-.17	-.25**
5. Introjected Regulation	-	-	-	-	-	.19*	-.05
6. External Regulation	-	-	-	-	-	-	.72**
7. Non Regulation	-	-	-	-	-	-	-

\*\* $p < 0.01$ , \*  $p < 0.05$ , Non Significant ( $p > .05$ )

Pearson correlation analysis in above table illustrates a significant positive relationship between Intrinsic regulation/motivation and mindfulness ( $r = .68^{**}$ ) indicating that increase in one variable increases the other one. The second important variable significantly connected with mindfulness is introjections which is the combination of an external source of regulation reinforced through internal pressures. A significant negative relationship of mindfulness was presented with external and no regulation because both of these forms are lacking internal locus and autonomy.

Table 3

*Summary of Backward Linear Regression analysis of the subscales of Sports Motivation predicting Mindfulness Attention Awareness among College Sports Players (N= 120).*

Awareness Subscales	B	S.E		Mindfulness
				95%CI
Intrinsic Regulation	1.71***	.28	.53	[1.16 – 2.26]
Integrated Regulation	.72*	.25	.23	[.21 – 1.22]
Introjected Regulation	-.79*	.27	-.19	[-1.29 – -.20]
External Regulation	.46	.27	.15	[-.07 – 1.00]
Non Regulation	-1.37***	.27	-.43	[-1.91 – -.83]
R <sup>2</sup>	.63			
F	38.76***			
ΔR <sup>2</sup>	-.002			
ΔF	.75			

\*\*\* $p < 0.001$ , \*  $p < 0.05$

The values in the above table show that forms of motivation are contributing a significant change in the outcome variable that is mindfulness. That is demonstrated by the value of  $R^2$  which is .63 which means that motivation can account for 63% of the variation in mindfulness. In other words, there might be many factors that can explain this variation in mindfulness, but this model which includes different aspects of motivation can explain approximately 63% of it. That means that 36% of the variation in mindfulness cannot be explained by motivation alone. F value is 38.76 which is significant at  $p < .001$  the result tell us that there is less than 0.1% chance that an F ratio like this would happen if the null hypothesis were true therefore it could be concluded that this regression model results in the significantly better prediction of mindfulness. The value of standardized beta coefficient gives a measure of the contribution of each variable

to the model regarding standard deviation. Intrinsic regulation ( $\beta = .53, p < 0.001$ ) and integrated regulation ( $\beta = .23, p < 0.05$ ) are significantly positive predictors of mindfulness; which means that intrinsic regulation is causing 53% change and integrated regulation is causing 23% change in mindfulness. Whereas Introjected regulation ( $\beta = -.91, p < 0.05$ ) and Non-regulation ( $\beta = -.43, p < 0.05$ ) are significantly negative predictors of mindfulness and the External regulation ( $\beta = .15, p > 0.05$ ) is a non predictor mindfulness. The overall table illustrates that the regression model is predicting mindfulness well.

## Discussion

From the above-mentioned results, it can be concluded that motivation is an important factor that contributes to mindfulness and thus improves the well-being of college sports players. Motivation is not a uni-factor construct it has multiple types and each type ranges from least to most self determined type of motivation. When individual engages in any activity with intent of their own sake in the absence of external pressures it is referred as intrinsic motivation and this is at the highest level of self determined motivation. The external regulation comes to play when individual behavior is regulated by external means such as rewards and constrictions. When individuals participated in any activity because of the importance one attribute to the activity it is called integrated regulation. Whereas when individual is motivated from within such as internal pressures like guilt, anxiety etc although the intent is not fully established as one's own it is called introjected regulation. In identified motivation person is involved in an activity because of the personal importance of a behavior and thus accepted its regulation as one's own thus the behavior is values as a life goal. Amotivated regulation is a state where individuals act without intent or they lack the intent to act, a perception of lack of control these individuals comes at the least level of self-determination because they have no sense of purpose, expectation of reward and no hope for the future that present situation can be changed (Ryan & Deci, 2000). The result indicates that intrinsic motivation as one of the most important motivational forms. The descriptive statistics of demographics show gender disparity in sports participation where only 30 girls were regularly participating in college sports as compared to

boys. This notion reflects upon the cultural constrained faced by women in the patriarchal Pakistani society. Gender division of the labor put women on the reproductive role as homemakers, men, on the other hand, are assigned the productive role of bread earner. Therefore they are provided with better education and less constraint on mobility (e.g., joining a sports club, playing sports at night especially cricket) while women are instructed to learn domestic skills which will eventually help them in becoming good mothers and wives (Ahmed & Ansari, 2011). All of the participants were unmarried (mean age=17.75) which is considered as late adolescents, and this is consistent with the country statistics where the mean age of marriage is 21.1 years (United Nations, 2013). Regarding sports type, the majority of the participants (70%) were in team sports such as cricket and football. The greater part of the participants (58%) had good sports experience which means that they feel happiness and satisfaction in playing sports, 93% participate in college sports because they believe that sports are beneficial for psychological and physical health whereas 7% participate in sports because it gives them an opportunity to enjoy with friends. It means that majority of the participants acknowledge the fact that sports are beneficial for physical and mental health. These results also signify the importance of intrinsic motivation (table 1 and 3).

The complexity of sports motivation is explained by Mladenović and Marjanović (2011) as the individual intricacy of motivation depends upon the process of sports socialization and numerous social influences that affect the psychological development by determining the quality and speed of internalization for the external influences which later on play a significant role for individual motivation. Integrated regulation is to identify with the values of an activity in a way that it became a consistent part of self. Results from Table 2 indicate a significant positive correlation between identified regulation and mindfulness ( $r = .53^{**}$ ). When Individuals perform an activity because they identify with the values and meaning of performing that behavior, then their behavior is regulated by identified regulation. Intrinsic, integrated and identified regulations are referred as "autonomous motivation" which means they also play a significant role in the satisfaction of basic psychological needs and thus have positive experiential outcomes (Deci & Ryan, 2008) therefore the significant contribution of these two types of motivation has been obtained through regression analysis.

Intrinsic motivation act as a natural buffer for cognitive, social, and physical development (Ryan, &Deci, 2000). Apart from amotivation very few individuals scored high on external motivation (Table 1). That may be because in Pakistan there are very few incentives or rewards given to students who participate in college sports. Therefore most of their motivation is coming from internal sources. When individuals are intrinsically motivated, they tend to satisfy the psychological needs for autonomy, relatedness, and competence which results in higher levels of performance, health, experience personal growth, and psychological functioning. That is also supported by the regression analysis where 36% variation can be explained by motivation. Previous researchers have supported the notion that physical activity has a potential to enhance dispositional mindfulness (Gilbert & Waltz, 2010; Roberts & Danoff-Burg, 2010; Mothes, Klaperski, Seelig, Schmidt, & Fuchs, 2014) and autonomous motivation such as intrinsic and integrated regulation has been determinant factor for regular participation in physical activity (Duncan, Hall, Wilson, & Jenny, 2010).

## **Conclusion**

The values in the above table show that forms of motivation are contributing a significant change in the outcome variable that is mindfulness. Intrinsic regulation, integrated regulation, identified regulation and Introjected regulation are significantly positive predictors of mindfulness. Since this study focused on the motivation, there could be other demographic variables that can explain the variance in mindfulness, therefore for future research it is suggested to add other psychosocial variables such as personality type, peer influence, gender and professional guidance. It is also important to note that no published data from Pakistan is available addressing the role of motivation in the armature sports players, so the present study is significant by assessing the importance of intrinsic motivation and mindfulness in college sports players. Due to certain limitations in sample size, time and finances, the power of generalization cannot be claimed. It is therefore suggested for future researchers to address the sports performance, academic achievement, coaching styles, personality traits along with large sample and diverse groups. Mental health professionals along with sports administrative

bodies and academics are welcomed to use the results of this research in promoting the culture of sports-related activities to enhance the well-being of youth and contributing in the productivity of the society.

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